

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/016104

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

The inventions as set forth in claims 1 to 38 are common to each other in relating to a plasmid originating in a microorganism belonging to the genus *Rhodococcus* and its partial fragment. As reported in Appl. Microbiol. Biotechnol., 2003, July, Vol.62, pp.61-68, however, a plasmid originating in a microorganism belonging to the genus *Rhodococcus* and its partial fragment have been publicly known already. Thus, the matter common to the inventions as set forth in claims 1 to 38 cannot be considered as a special technical feature. Accordingly, it appears that there is no technical relationship among the inventions as set forth in claims 1 to 38 involving any special technical feature and these groups of inventions (continued to extra sheet)

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

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Continuation of Box No.III of continuation of first sheet(2)

cannot be considered as being so linked as to form a single general inventive concept. Such being the case, the inventions claimed in the present case have three groups of inventions, i.e., (1) the inventions relating to a plasmid pRET1100 and its fragment as set forth in claims 1 to 11 and the parts relating to the fragment of the plasmid pRET1100 in claims 17, 24 and 27 to 38; (2) the inventions relating to a plasmid pRET1000 and its fragment as set forth in claims 12 to 16 and 18 to 23 and the parts relating to the fragment of the plasmid pRET1000 in claims 17, 24 and 27 to 38; and (3) the inventions relating to a DNA fragment represented by SEQ ID NO:77 as set forth in claims 25 to 26 and the part relating to claims 25 to 26 in claims 27 to 38.

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A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl⁷ C12N15/09, C12N15/31, C12N15/63, C12P7/02, C12N13/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ C12N15/09, C12N15/31, C12N15/63, C12P7/02, C12N13/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

BIOSIS/WPI (DIALOG), MEDLINE (STN), JSTPlus/JST7580 (JOIS),
SwissProt/PIR/GeneSeq, GenBank/EMBL/DDBJ/GeneSeq

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	De Mot R. et al., Structural analysis of the 6 kb cryptic plasmid pFAJ2600 from <i>Rhodococcus erythropolis</i> NI86/21 and construction of <i>Escherichia coli</i> - <i>Rhodococcus</i> shuttle vectors, <i>Microbiology</i> , 1997, Vol.143, pages 3137 to 3147	1-38
A	Kostichka K. et al., A small cryptic plasmid from <i>Rhodococcus erythropolis</i> : characterization and utility for gene expression, <i>Appl.Microbiol. Biotechnol.</i> , 2003 July, Vol.62, No.1, pages 61 to 68	1-38

☒ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
15 December, 2004 (15.12.04)

Date of mailing of the international search report
28 December, 2004 (28.12.04)

Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

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International application No.

PCT/JP2004/016104

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2002/70714 A1 (DAIICHI FINE CHEMICAL CO., LTD.), 12 September, 2002 (12.09.02), & EP 1371731 A1 & KR 2003096268 A & CZ 200302343 A3 & AU 2002234942 A1 & JP 2002-570739 X	1-38